THE

# HORTICULTURAL REGISTER

AND

## GARDENER'S MAGAZINE.

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### ON BOTANIC GARDENS AND HORTICULTURAL SOCIETIES.

There are not many instances where these institutions have been begun and continued with economy and success, or which have been conducted with that singleness of purpose to subserve to public utility, which ought to be the basis and the end of such establishments. Scientific men who are generally and on some accounts properly selected to superintend them, and to conduct the affairs, do not often possess those habits of business or economy which fit them to control the money concerns or enter into the calculations so necessary to ensure the greatest possible effect at the smallest expense. This is the quicksand which has nearly engulphed several attempts, undertaken in the best possible spirit, and with the most unbounded liberality. It is true, the field of experiment is often expensive to cultivate, and the crop inadequate, nor is it always practicable, strictly to limit beforehand the cost; yet the idea of these institutions being in debt, is so repugnant, that every advantage ought to be foregone rather than this result be produced; it is the first signal of disunion and dissolution.

Botanical collections of plants exotic and indigenous, experiments on edible vegetables and fruits, their improvement and cultivation, the production of species by hybridising, the selection of best stocks for grafting, the study of all the laws governing vegetable life, and the public promulgation of results, are the useful and proper aims of Botanic Gardens, but there is one purpose which I think is scarcely considered of sufficient weight. I allude to the numerous tribes of

depredating insects which annually devastate acres and miles of cultivation, filling the heart of the industrious farmer and horticulturist with dismay.

Of what use is it to manure, to sow and to till on the most approved systems, to toil, to eradicate the weed, if the crop is to be devoured by the ravages of the fly? For what purpose do we select our trees, our grafts, and plant our orchards, if the fair promise is to be destroyed by the canker worm.

It is highly meritorious to point out to the farmer the best methods of planting, manuring, and raising crops, but not less so to teach him how to preserve them, that his granaries be filled with corn and all manner of fruits.

Entomology or the knowledge, not of the mere names, but of the nature, habits, food, &c., of insects, is thus in an especial manner combined with botanical knowledge, and particularly with the practical and useful branches of it, therefore, in all Botanic Gardens where one head does not unite both studies, a second should be added, and an active efficient committee be appointed for the purpose of directing experiments.

In most public establishments the insect tribe are destroyed as soon as they appear, and the gardeners pride themselves on the cleanliness of their plants and trees, and this is praiseworthy, although by it every ground for experiment is removed.

As soon as a tree is discovered to be infested with any insect it should be devoted to entomological experiment, and the creature be watched in all its states, in every one of which various applications might be made with the view of ascertaining what would be most injurious to the insect, its eggs, &c., with the least hurt to the trees, in order to decide in what state it may most easily be subdued; the date and method of its arrival, stay and departure after providing for its reproduction, should be carefully noted, with every other particular necessary to elucidate its natural history.

These observations might be carried on in the garden itself occasionally as opportunities offered, for the propriety of introducing a noxious insect into the establishment for the sake of experiment might well be questioned, but a much larger sphere of utility would be open for an active committee, in instituting trials under their immediate direction in the infested gardens or farms of the members of the Society.

Often as I have passed large apple orchards entirely denuded of

their foliage in the midsummer, by the canker worm, have I regretted that they were not placed under the superintendence of such a committee, and every six or more trees subjected to different tests for the destruction of the destroyer; it seems improbable that judgment and perseverance should not sooner or later discover some remedy for this scourge, which would be easy in application and reasonable in expense; and thus with every other depredator.

There are some insects which prey on others, so that a gardener or farmer in ignorance may destroy a protector, and many birds who feed on insects are killed by the gun, or driven away by various devices, that they may not devour a few cherries or other fruits; this is hardly fair, they are certainly entitled to a share of the dessert; for myself they are always welcome to my portion in return for the charm of their company; the beauty of their plumage, their graceful motions, their sweet and lively warbling, is as effectual a preventive of hypochondria, as the sparkling wit, or the merry song of conviviality.

There is much reason to believe that different manures, form the nurseries, and even perhaps the vehicles of introduction of various vermin; this might make an object of attention, as well as experiments on the strengths of them, and their value in different stages of decomposition. Many good cultivators agree with me in opinion, that the mellowing of manure by what is termed leaving it twelve or eighteen months to ripen, is attended by considerable loss of strength and valuable properties; this is of consequence, where, as in agriculture, it is required to be spread over as large a surface as possible; yet, for many plants fresh manure is indisputably too hot and rank.

It must not be imagined that although every work on agriculture or horticulture teems with recipes and preventives against almost every insect known, that there is not much still to be effected on this important subject; the ravages of the canker worm still desolate our orchards and the curculio still punctures and destroys our fruit; the great advantage of Societies on these subjects, is the high authority they establish for the operations they recommend, and the certainty that no mode of proceeding can be promulgated by them which has not received the sanction of careful experiment.

The subscription of two or three dollars annually, for the purpose of such associations, is a mere trifle to the man who possesses acres of tillage or orchard land, nor is it of much more consequence to the inhabitants of the city, the price of whose consumption of fruit and

vegetables depends on the plenty or scarcity of the quantity raised by the good or bad management, that is, the ignorance or knowledge of the farmer.

In this, however, as in most associations, everything depends on proper direction, on the economical application of the funds, and on the extent of public spirit, which ought to prompt some to devote a portion of their time for the benefit of society, and others whose talents and experience have justly given weight to their names, to afford by the influence of their example every possible support to such undertakings. The Agricultural and Horticultural Societies already formed, have already been of great and acknowledged service, and under improved management, for who is bold enough to aver that they are now all in their ultimate state of perfection, will no doubt render many more essential services; in addition to this they raise the character of the tiller of the soil in public estimation, by exhibiting the splendid effects of industry, energy and ingenuity, while they bring into agreeable contact and frequent communication, men the similarity of whose pursuits give a charm and a relish to their mutual intercourse. J. E. T.

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## ON THE PEACH, NECTARINE, AND APRICOT.

[Continued from our last.]

On the subject of pruning, it may be well to observe that what is called in Europe, autumnal pruning had better be altogether omitted in this country, as certainly the wounds inflicted by cutting at that period do not get sufficiently healed to stand the usual severity of the winter season.

The nectarine is called Persica lævis, the smooth peach, and according to Forsyth, received its common appellation from nectar, the poetical drink of the fabulous gods of the ancients. The flesh is rather firmer and the whole fruit more plump than the peach, — like this, the varieties are divided into freestone and clingstone.

### FREESTONE NECTARINES.

Hoy's New Seedling. — Leaves with reniform glands; flowers small; fruit middle size, pale green and red, ripens about the beginning of September, somewhat resembles the Elruge.

ELRUGE, *Claremont, Oatlands*, of others. Leaves with reniform glands; flowers small; fruit middle sized, pale green and red, ripens about the end August; flesh white almost to the stone; a very free bearer, and well adapted for the forcing house.

BALGONE. Leaves with reniform glands; flowers small; fruit large, pale greenish, red on the sunny side; ripens beginning of September.

BRUGNON, *red at the stone*, commonly called *Brinion*. Leaves with reniform glands; flowers small; fruit large, pale yellow, red on the sunny side; ripens beginning of September.

DU TELLIER'S, *du Tilly's, Duc de Tello*. Leaves with reniform glands; flowers small; fruit large, pale green and red; ripens beginning of September.

DOWNTON. Leaves with reniform glands; flowers small; fruit large, pale green and red; ripens middle to end of August.

MURY, *Black Mury*. Leaves with reniform glands; flowers small; fruit middling size, pale green on one size and very dark red on the other; ripens middle of August.

PITMASTON ORANGE, *Williams' Orange*. Leaves with globular glands; flowers large, orange and dark red, ripens middle of August; a very fine bearer and hardy, therefore particularly suitable for this climate.

HUNT'S EARLY TAWNY. Leaves without glands; flowers small; fruit middling size, orange and dark red, ripens beginning of August. A very distinct sort and valuable for its early maturity.

TEMPLE'S. Leaves with reniform glands; flowers small; fruit rather under middling size, pale green and red; ripens end of August, rather inclined to shrivel when ripe.

VERMASH, *True Vermash*. Leaves with reniform glands; flowers large; fruit middling size, green and red; ripens middle of August; rather rare.

EARLY VIOLET, *Grosse Violet hâtive, Violette de Courson, le gros Brugnon*. Leaves with reniform glands; flowers small; fruit large, pale greenish and red; ripens end of August, flesh very red at the stone.

EARLY VIOLET, of Hooker, *Lord Selsey's Elruge, Hampton Court, New Scarlet, &c.* Leaves with reniform glands; flowers small; fruit large, pale green and red; ripens beginning and middle of August; differs from the preceding somewhat in taste, ripens earlier, and is much better adapted for the forcing house; both are, however, first rate sorts.

Aromatic. Rather resembles the last named. Leaves with reniform glands; flowers small; fruit pale yellow and red, middling size, ripens end of August.

Old White. Leaves with reniform gland; flowers large; fruit large, white, ripening early in August. Favorable soil and situation have great effect in the flavor and richness of this sort, which in contrary circumstances is hardly worth eating.

Perkins' Seedling. A seedling raised by S. G. Perkins, Esq. from the Lewis nectarine, a beautiful fine fruit, globular, bright yellow, but of a dark purple crimson on the sunny side. — [Kenrick's Orchardist.]

### CLINGSTONE NECTARINES.

Late Newington, *Red Roman*, of some, *Old Newington*. Leaves without glands; flowers large; fruit dark red, large, ripens in September; a free bearer, shrivels when ripe and then only fit to eat.

Early Newington, *Early Black, Lucombe's Seedling*. Leaves without glands; flowers large; fruit large, dark red, ripens early in August.

Tawny Newington. Leaves without glands; flowers large; fruit large yellowish brown, red on the sunny side, ripens beginning of August.

Roman, *Old Roman, Red Roman, Brugnon musqué* of Duhamel. Leaves with reniform glands; flowers large; fruit large, green, brown and red; ripens beginning of August.

Imperatrice. Leaves with reniform glands; flowers small; fruit large, dark red; hangs and shrivels like a Newington.

The preceding selection contains only very first rate sorts; there are others either not sufficiently known for description, or of which the fruit is rather inferior, but yet which may perhaps be more hardy or have other qualities, entitling them to cultivation; such are

*Pince's Golden, Bright Red Alberge, Ford's Seedling, Fox's Seedling, Please's Seedling, Pholia, Lyndoch, Sand's Seedling, &c.* The skin of the nectarine not being protected by down, like the peach, renders it more liable to the attacks of the insect tribe, from which the precautions, taken in countries where the trees are cultivated with much care and trained on walls, would hardly protect the standards here; the numerous recipes are therefore omitted.

The Apricot, *Armeniaca*, so called from its originally having been introduced from Armenia, is altogether a different tree from the

preceding, both in habit and fruit. The flowers are white, tinged with red, and appear the end of April or beginning of May on shoots of the preceding year, and on spurs of two or more years old, consequently the pruning requires a totally different management from the peach or nectarine. Generally speaking the apricot is rather impatient of the knife, and many trees are injured by over pruning.

The best time is in March or just previous to the bursting of the blossom; where spurs are too numerous on old wood they should be carefully thinned out, also cut some of the most naked parts of the last two years' bearing branches, always cutting to either a leading young shoot or to a lateral which may be converted into one. Such shoots as are retained for bearing should be moderately shortened, if weak to one half. Never prune below all the blossom buds, except to provide wood, in which case cut near the origin of the new branch, taking care of the spur.

The apricot is much better for preserves, marmalades, jelly and other confectionary, than when fresh; the Chinese make the clarified juice into lozenges, and the thinnings of the fruit when green and made into tarts are justly esteemed a great delicacy; if allowed to grow too thick they will never attain a good size or flavor; three or four inches asunder is a proper distance for them to be left to ripen.

Pallas says that the mountains in Caucasus are covered with the apricot to their very summits.

Moorpark, *Abricot de Nancy* of Duhamel. Leaves large, roundish, pointed; fruit large, roundish, compressed; skin of a brownish orange color; flesh dull reddish orange, juice high flavor peculiar to this sort. The next in value is the

Heemskirke. The whole tree rather resembles the Moorpark; the flesh of the fruit very bright deep clear orange, tender, juicy, rather sweeter than the Moorpark, with a rich delicate flavor.

Large Early Apricot, *Abricot gros precoce, Abricot de gaen, die grosse früh Apricose* of Sickler. Leaves large, broad oval, tapering to the petiole. Fruit large oblong, the back nearly straight; skin downy, red orange on the sunny side, pale orange on the other; flesh juicy and rich, ripens early in July.

Royal Apricot, *Abricot Royale.* Fruit about the size of the Moorpark, of a dull yellow color, slightly colored with red in a small space; rather more acid than the preceding; is valuable, as it ripens from a week to a fortnight earlier than the Moorpark.

White Masculine, *Abricot blanc*, of Duhamel, *Abricot peche*, of

Mayer. An early and excellent fruit, flesh pale yellow, juicy, tender, parting from the stone; flowers small, fruit round, rather small.

CRUFT'S LATE APRICOT. A large and very superior fruit which lately originated in the garden of Edward Cruft, Esq. Boston. Very rich, juicy and sweet; in the opinion of good judges a variety of surpassing excellence.

MUSCH MUSCH APRICOT, *Abricot d'Alexandrie.* Leaves roundish, pointed, doubly serrated or toothed; fruit about the size of the Masculine, roundish, compressed, skin straw colored and deep orange on the sunny side; flesh very tender and sweet, semi-transparent, kernel of the stone sweet like a nut — probably a native of the moist pastures which abound in the midst of the deserts of Upper Egypt, where the fruit is gathered in large quantities, dried and brought in that state for sale. This sort is hardly enough known either here or in Europe, for its value to be ascertained.

There are several varieties of the apricot which are preferable for preserving; those recited are more fit for the dessert. For confectionary the most esteemed sorts are the

*Montgamet Apricot*, *Orange Apricot*, a very abundant bearer, *Brussels Apricot.*

The apricot is generally propagated by budding on a plum stock, but Mr Knight in the Hort. Trans. recommends budding the Moorpark on a seedling apricot stock, which he has found prevents the trees from becoming diseased and debilitated, as is apt to be the case on plum stocks. From the middle of June to the end of July is the proper season for this operation: the apricot will not readily bear forcing, but it is naturally an early fruit.

There are some other varieties of the apricot interesting to botanists. *Armeniaca dasycarpa* with a black fruit, eatable, called *Abricot noir* in the French gardens.

*Armeniaca persicifolia*, peach leaved apricot. Fruit variegated with yellow and red.

*Armeniaca Sibirica.* Siberian apricot, with rose colored flowers In Transalpine Dauria, the mountains are clothed on the north side with the purple flowers of Rhododendron dauricum, and on the south with the rose colored flowers of the apricot.

*Armeniaca brigantiaca*, a native of Briançon in France; flowers white or pink; the inhabitants express an oil from the kernel, which serves all the purposes of olive or almond oil.

At the meeting of the London Horticultural Society last May, Mr Lindley read a translation of "Observations on grafting apricot trees,

by Mr Deval, Secretary to the Antwerp Hort. Soc." He attributes the frequent failure of grafts to the age of the wood on which the graft is made; the vitality of the tree being too much exhausted previous to the adhesion of the scion. When wood of two, three or even four years was employed the operation seldom failed. J. E. T.

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## THE CELEBRATED CEDAR TREES OF LEBANON.

These form the subject of one of the landscape illustrations of the Bible, by Finden, lately published in London. They were sketched by C. Barry and the engravings are in the first style of the art. J. H. Horne on these far famed trees, observes that they are situated on a small eminence in a valley at the foot of the highest portion of the mountain.

The land on the mountain side has a sterile aspect, and the trees are remarkable for being in a single clump.

By the natives they are called Arsileban. There are in fact two generations of trees, the oldest are large and massy, four or five and even seven trunks springing from one base, they rear their heads to an enormous height, spreading their branches afar, and they are not found in any other part of Lebanon, though young trees are occasionally met with.

The ancient cedars, those which superstition has consecrated as holy, and which are the chief objects of the traveller's curiosity, have been gradually diminishing in number for the last three centuries, as may be noted from the following record.

In 1550 Belloni found there twentyeight in number.
1575 Rauwolf, twentyfour.
about 1600 Dandini,
" 1650 Thevenot, } twentythree.
1697 in Maundrell's time they had dwindled down to sixteen.
1738 Dr Pococke only found fifteen standing.
1810 Burckhardt, eleven or twelve, but there were 250 others of a very large size, about fifty of middling size, and more than 300 smaller and young ones; lastly, in 1818 Dr Richardson found that the old cedars, *the glory of Lebanon* were no more than seven in number.

In the course of another century, perhaps, not a vestige of them will remain, and the prediction of the prophets will be most literally fulfilled.

[For the Horticultural Register.]

## VALUABLE DONATIONS OF NEW FRUITS.

Mr Editor — It may not be forgotten, that during the summer of 1831, a valuable donation of scions of many new kinds of Pears, of undoubted excellence, was sent by Professor Van Mons of Louvain in Belgium, to the Massachusetts Horticultural Society. Unfortunately, those were delayed in a protracted route through Paris and France, and never arrived in America till August, and then though evidently in a ruined condition, every art, every exertion, was essayed to save them, but in vain, for their destruction was total.

The next year, or in 1832, another consignment of scions of more than a hundred and twenty new kinds of Pears, was sent by Dr Van Mons, to the same Society, together with some sheets direct from the press, of certain publications having reference to them. The letter to Gen. Dearborn indeed came as directed, but the donation of the new kinds of fruit, and the publications which accompanied them, were utterly lost, and never arrived at their destination, and no intelligence concerning their fate could ever be obtained.

At a later date, application was made to Dr Van Mons, by Mr Robert Manning and myself individually, for the renewal of these same kinds which had been sent by him in the former donation to the society; also for some other new and celebrated kinds which had been described either by him or by M. Bosc, in the celebrated Nouveau Cours Complet D'Agriculture; and through his distinguished liberality and philanthropy, scions of a numerous list of new varieties which are described as of first rate excellence, have been sent to us, during the years 1834 and 1835. More than ninety *named* kinds have thus been received, most of all which are new to our country and most all are now living, and growing. Besides these, scions of many other new, and as yet *unnamed* kinds were sent, near seventy of which are also living and growing. All these last designated are by *numbers*, which according to Dr Van Mons have been described by him in a volume which was then in press, at the time his last letter was written.

Among the kinds renewed of those formerly sent and lost, we find the "*Dearborn*," — a fruit, which according to M. Van Mons, has been pronounced exquisite by amateurs. It was so named by

him for Gen. Dearborn, now the Adjutant General of the Commonwealth, and so lately the excellent, the indefatigable President of the Massachusetts Horticultural Society. Another new kind has also been sent, which he has called the *Beurre Manning*, so named by Dr Van Mons for our excellent friend Mr Manning. And another which he has named *Kenrick* for the writer of this article.

Besides all these, a few new kinds, unnamed, of other species have been received, most of which are alive and doing well.

During these same years of 1834 and 1835, other donations have been received from the London Horticultural Society, through the liberality of and munificence and by the special decision of the council, to whom our application was referred. Most of these are selections of new Flemish kinds which have all been proved in the celebrated garden of their society at Chiswick, and have been noted in their descriptive catalogue of the vast collection of fruits which have there been congregated from all countries, to the date of the volume in 1831. These descriptions are ascribed to Mr Robert Thompson, who is the superintendent of this department, and who is so eminently distinguished for his research and knowledge and accuracy on these subjects.

Some few of the kinds which we have thus received, we had indeed received before, from other and less sure sources, but were anxious to test their genuineness by comparison from these peculiar sources, which have now become so celebrated for their intelligence and accuracy.

As to the varieties of apples sent from London, they were a few which by particular request were selected by Mr Thompson, not from among those kinds which succeed best of all in England, but as the most celebrated kinds in the *more southern* sections of Europe; these being from the climates more congenial with our own during summer.

These new and rare additions to our list of fruits, the result of the years of incessant and unwearied toils of the most scientific cultivators on earth, will enable us shortly, as we trust, to make from them, a new and most superior selection, of a limited number, adapted to our highly favored climate.

Other donations of a few rare, new and valuable varieties have also been received from M. Saul, an Amateur of Lancaster in the interior of England, from Dr S. P. Hildreth of Marietta, Ohio, and from numerous other sources.

## *New kinds of Pears received of Professor Van Mons, during the years* 1834 *and* 1835.

1 D'Arenburg
2 D'Amandes Double
3 Bakpeer
*4 Belle Alliance
*5 Bergamotte Libboten
6 —— Tardive
7 Beurre Beauchamps
8 —— Bonnet
9 —— Bronze
10 —— Duquesne, *very early, very fine*
11 —— Leutin
*12 —— Manning
13 Bezi Blanc
*14 —— Crassanne Tardive
*15 —— de Louvain
16 —— du Printemps
17 Bois Napoleon
18 Bon Chretien D'Espagne
19 Bon Parent
20 Bosc
*21 Bosc D'Ete
22 Brande's St Germain
23 Bretagne leCour, 2 lbs. *delicate to cook.*
*24 Calebasse Bauchau
*25 —— Marianne
26 —— Monstreu
*27 —— Verte
28 Capiaumont
*29 Capucine Van Mons
30 Charles Van Mons
*31 Charlotte D'Anvers
32 Clara
33 Colmar Gossart
34 Coter Peer
*35 Crommen Boom
36 Curtet
37 Davy
38 *Dearborn*
39 Delbecq
40 Delices de Charles
41 —— de Jodoigne
42 Dillen
43 Doyenne Louis
44 Doyenne de Mons
45 Dumortier
46 Dundas
47 Duparrian
48 Enfant Prodige
49 Figue *Extra*, not of France
50 Fleur de Neige
51 Fondante des Bois
52 Fourcroy Bouvier
53 Gros Bruyn
*54 Gros Colmar Van Mons, keeps two years
55 Henkel
56 Henri Van Mons
57 Henriette
58 Hericart, a production of 1834, and worthy its name
59 Innominee
60 Josephine or Jaminette, Sabine of the French
61 Jubin
62 Jutte or Buist
63 Kenrick
64 Leon le Clerc
65 Louise de Bologna
66 Louise Bonne Real
*67 Louise ed Prusse
68 Madame Verte
69 Maly
70 Marie
71 Marie Louise
72 Marie Louise (Bis)
73 Marie Louise, Nova
*74 Napoleon
75 Naver
76 Niel
77 Oken D'Hiver
78 Pileau
79 Poire Limon
80 Quetelet
81 Rameau
82 Reine des Pays Bas
83 Rouselette de Meester
84 —— Sucre
85 —— Sutin
86 —— Van Mons
87 Santellette
*88 Serrurier
89 Spoelberg (Vicomte)
90 Spreum
91 Van Assene
92 William.
93 Wurtemberg

The numerous varieties designated by numbers are here omitted.

## *List of Fruits received from the London Horticultural Society, during the years* 1834 *and* 1835.

PEARS.

1 D'Aremberg
2 D'Amaulis
3 D'Ananas D'Ete
4 Alpha
5 Autumn Colmar
6 Beurre Beauchamps
7 —— Bosc
8 —— Capiaumont
9 —— Crapaud
10 —— Duquesne
11 —— Duval

12 Beurre Easter
13 —— Van Mons
14 Bezi Vaet
15 Bishop's Thumb
16 Charles D'Autriche
17 Colmar Neill
18 Comte Lany
19 Delices D'Hardenpont
20 Duchesse de Mars
21 Early Bergamotte
22 Famenga
23 Flemish Beauty
24 Fondante D'Automne
25 Fondante Van Mons
26 Forme de Delices
27 Fourcroy
28 Garnons
29 Glout Morceau
30 Grumkower Winterbirne.
31 Hacon's Incomparable
32 Hazel
33 Henri Quatre
34 King Edwards
35 Louise Bonne de Jersey
36 Monarch (Knight's)
37 Ne Plus Meuris
38 Parmentier
39 Passans de Portugal
40 Passa Tutti
41 Poire Sabine
42 Reine des Poires
43 Spence
44 Thomson's
45 Tillington
46 Whitfield
47 Winter Crassanne.

APPLES.

Brabant Belle Fleur
Calville Blanche D'Ete
Gravenstein
Mela Carla

The mode adopted by Mr Manning for saving these scions, consisted in cleft grafting part of them on thrifty stalks. But part were preserved by crown grafting, which he considers much more sure. The scion being prepared for splicing, by being cut sloping, and the top of the stock being sawn off, a slit of about an inch long is made from the top of the stock downwards and the bark being raised the scion is inserted between the bark and the wood, — and a bandage of matting being applied around the stock, it is covered with clay or grafting composition. But side grafting Mr M. has found is still more infallible. This is performed in the same manner as in crown grafting, except that it is performed below the *summit*, that the sap may continue circulating above. A cross cut being made in the stock, and a vertical slit proceeding downwards from this, the bark is shaved down from above, and removed, that the scion may fit close; this being inserted and secured with a bandage is covered with clay. Some of these kinds which were not received till late in May and late in June were in a desperate or ruined state. Where life existed I found that inoculating them in thrifty young stocks was the most infallible of all modes to save them. The buds in this case were taken off from the scion with a small thin slip of wood, which occupied about one third of its length on the middle section beneath the eye. The very tip of the twig was transformed to a scion as in splicing and thrust downward beneath the bark as in inoculating, and bound around with matting and the exposed parts of the wound covered either with a string or with grafting wax. *Many kinds* I have saved by these last modes, for I practised no other. Gradually the top of the stalk was reduced and the whole force of the tree transferred to the bud.

Many of these scions were much dried up or shrivelled. These were recovered by steeping in fresh water, till the moment they had become saturated or swollen to the natural size, when they were grafted or inoculated without delay. While some few required but a few hours, it was absolutely necessary to steep others for a week or ten days. WILLIAM KENRICK.

*Newton, July* 13, 1835.

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## BOSTON ASLYUM AND FARM SCHOOL, ON THOMPSON'S ISLAND, BOSTON HARBOR.

WE were much gratified with a visit to this institution, and think the principles on which it is founded, and the manner of carrying these principles into execution, need only be known to insure for the establishment the hearty and active support of all whose minds are rightly disposed towards their fellow creatures, and whose liberality and exertions find the sweetest reward in the consciousness of being stimulated solely by the desire of doing good.

The success of this and all similar institutions depends much upon the management, and upon the character of those under whose personal direction they are carried on. In this the committee appear to have been singularly fortunate, by the selection of Capt. Chandler as superintendent; at the time we visited the Island the boys, fiftysix in number, had been there only three weeks, yet the discipline and system appeared as regular as if they had been there three years, nor did this seem to have been produced by fear, the boys were as unembarrassed and as happy in the presence of Capt. Chandler as in his absence.

The Island consists of about one hundred and forty acres, and is remarkable for variety of soil sheltered and exposed spots, abundant sea weed for manure, in fact for nearly every requisite to render it, as intended, a perfect school farm and garden, where boys even of the tender age of seven might be initiated into, and confirmed in habits of agricultural industry, as well as acquire that knowledge which must render them orderly and happy members of society.

On their first arrival, of course they did not know the difference between the weed and useful vegetable; this they had already learned perfectly; a small spot was selected where each had the liberty to

square out his own little garden, unbiassed and untaught, to exercise his natural ingenuity and talent, and watch with expectant eye the sprouting and progress of the seed sown by his own little hand.

That Capt. Chandler is an intelligent and experienced agriculturist, is evident from the judicious manner in which the different advantages of soil and site are appropriated to different purposes, every plant appeared in vigorous and healthy vegetation; the various contrivances for feeding, watering, and managing the live stock were well adapted.

There is a small plantation of the Morus multicaulis for the silk worm, put down this spring; the plants are under successful propagation by laying and wiring at each joint, by which the stock will probably be tripled next year, so that at a future period this business may be carried on here to a considerable extent.

The domestic economy seemed under equal regularity and system, every place perfectly neat, clean and in order.

There are now only fiftysix boys, with ample convenvience for two hundred, and we do not doubt that the liberality of the public will soon afford funds sufficient to fill up the number; whoever in his own mind compares the children, who swarm in the public streets, furtively laying their hands on all they can, and not unfrequently encouraged in the habits of pilfering by those who ought to train them in better ways, who are daily exposed to debasing and demoralizing scenes of inebriety and discord, with the children here educated in habits of industry and decency, here taught that knowledge which will enable them honestly to earn their living, here receiving those early impressions of steadiness and order, which will dispose them to impart the same to succeeding generations; whoever compares these two states, may easily persuade himself into a belief that it is a privilege and an enjoyment to bear a part in dispensing to our fellow creatures the advantages of the simple but moral and efficient education which this institution provides, and that it is a duty thus actively to exhibit our gratitude to the Great Author of all blessings for those which are kindly thrown into his own lot.

Those who assist either by annual subscription or donation towards extending these advantages to the number of children which this establishment is calculated to accommodate, may rest assured that the value of their gifts will not be diminished by want of proper management, but that every dollar will be made available to its utmost extent.

J. E. T.

## OF ODOURS.

Not less curious nor less difficult to reduce to any intelligible laws is the subject of Vegetable Odours. Our senses are daily gratified by the sweet perfumes exhaled by the leaves and flowers that surround us; and art exhausts its skill to preserve them by means which enable us always to have them present for our use; but as to the reasons why one kind of flower is odoriferous, and another scentless, we are still more in the dark than in what relates to color. Here, therefore, we shall confine ourselves very much to a mere statement of facts, introducing theory only in cases which may appear to be pretty well understood. For this purpose we avail ourselves of many of the materials collected by De Candolle in his invaluable *Vegetable Physiology*.

All odours are owing to the disengagement of volatile matter, and as there are few organized bodies in which, in their natural state, there is not some volatile constituent part, so neither are there any organic bodies absolutely destitute of smell. But it is only to cases in which the scent is very perceptible to our senses that we apply the idea of odoriferous, and it is consequently to those that we here confine ourselves; dividing them into *permaneut*, *fugitive*, and *intermittent*.

Those odours are the most *permanent* in which the volatile matter is so enclosed in cells and concentrated as to disperse slowly. Of this many instances are afforded by wood and bark, which being in truth the only permanent parts of vegetation, will of necessity be the receptacle of durable odours; such parts are not scented, because of their own proper nature, for all the tissue of plants is originally scentless, or nearly so, but they owe their property to the fragrant secretions imprisoned in their cavities, and the permanence of their odour will be proportioned to the difficulty the volatile parts of their secretions experience in escaping through the tissue which incloses them, as well as to the degree in which the volatile matter may be fixed. Thus resinous woods, such as Cedar and Cyress, are fragrant for an indefinite period, because the resinous matter in which their odour resides is parted with slowly. Parts, whose scent resides in essential oil, preserve their scent for a long time, where the essential oil is but slightly volatile, or the wood is thick and hard: thus the Rose-wood of Teneriffe (not the Rose-wood of the English cabinet-makers,) produced by Convolvulus scoparius, preserves its odour a very long time;

and in order to elicit it, it is necessary to rub the wood strongly, so as to produce heat enough to volatilize the matter which is locked up in the very compact tissue of which that plant consists. The necessity of producing a little heat, in order to produce an exhalation of the volatile matter, is further exemplified by the fragrance emitted by many woods, otherwise scentless, when exposed to the violent friction of a turner's lathe: Beech is said to acquire, under such circumstances, the smell of Roses. But when, on the other hand, the volatile matter is enclosed in wood of a loose texture, neither is heat required to elicit it, nor has the wood, if exposed to the air, the power of retaining it for any considerable time, for the oxygen of the atmosphere will seize upon it rapidly, and quickly leave nothing behind but the inodorous tissue: this happens in Cassia and Cinnamon.

*Fugitive* smells are those which, belonging to perishable organs, are either extremely perishable in their very nature, or are placed in tissue of the laxest kind, or are situated on the surface of the plants where their volatile parts are continually abstracted by the atmosphere, or finally are secreted in quantities so small that a short exposure to air suffices to dissipate them. All these odours are produced only during the life of a plant; they are dispersed as they are formed, and after death leave no trace of their existence behind them. Like permanent odours these are continually given off, and in some plants, as the Orange and the Violet, without any variation in intensity in different states of the atmosphere; but in the majority of cases the power of smell will vary according to the elevation of temperature, and the dampness of the air. This fact must be familiar to all who are acquainted with gardens. In the hot, dry weather of a summer's noon, flowers either becomes scentless, or at least lose a large proportion of their usual fragrance; and in walking though a wilderness of the most sweet smelling plants, we find little sign of their odour, unless they are bruised or trampled upon. But if a heavy shower should come on, all will be changed in an hour's time; every leaf, every flower, will emit its peculiar odour; the Musk plant (Mimulus moschatus) will fill the air with its singular scent, and it will be obvious that the addition of moisture to the air has produced a total change in the action of the odoriferous organs of plants.

The same phenomenon is daily repeated in the driest days of autumn. Those only who are accustomed to take their early walks abroad can have any idea of the difference between a richly stored garden early in the morning and at noon. When the sun has dried

the air, and has been beating for some time upon vegetation, ill able to bear his action in consequence of the dryness of the source from which they draw their means of compensating for evaporation, however beautiful a garden may still remain, it cannot be compared to the same place before the dew has dispersed — when every herb, tree, and flower is pouring forth a stream of the most varied and delicious fragrance — when the air is impregnated with the most delicate balsamic odour — and when all nature seems as if offering up incense in gratitude for the refreshing powers of darkness and of dew. Let any one, for example, visit a thicket of Cistuses at noon, and again the next morning, and the difference will be exceedingly apparent. To what cause this is owing is unknown; possibly the effect of dryness and excessive heat may be to close the stomates, and to contract the tissue of plants, thus rendering it difficult for volatile matter to pass through their cuticle: it may also act by depriving them of the necessary proportion of water required to enable them to perform their functions of secretion and assimilation, and thus arrest for a time the elaboration of the fugitive principles upon which fragrance depends. While, however, dew and showers, with intervals of bright light, are eminently favorable to the eliciting of vegetable perfumes, a continance of wet and gloomy weather, without much sunshine, is as greatly unfavorable. This latter circumstance is explicable upon the general law of physiology, that secretions cannot be readily produced without the direct assistance of the sun's light.

Without regard to what we call *intermittent* odours, no explanation seems possible in the present state of our knowledge. A few examples of them will, therefore, be all that we can give. All dingy flowered plants, such as botanists call *tristes*, belonging to this class; such as the Pelargonium triste, Hesperis tristis, Gladiolus tristis, which are almost entirely scentless during the day, but become delicously fragrant at night. Great numbers of Orchideous plants have flowers possessing the same property; the Catasetums have a fine aromatic odour at night, none in the day, except C. purum; Cymbidium sinense is also chiefly fragrant at night; and so with a great number more. Cestrum nocturum is another plant of the same nature; in the day it has no odour, at night its perfume is extremely powerful. One of the most singular instances of exception to all rules appears to be referable to this class: Cacalia septentrionalis exhales an aromatic odour if exposed to the direct rays of the sun, and if anything is interposed between it and the sun its odour disappears, but is renewed as soon as the interference is removed.

Agreeable as vegetable odours usually are to our senses, there are some striking exceptions. Many Stapelias, the Arum dracunculus, and several other species of the same genus, whose flowers are of a deep livid color, have a smell so completely that of putrid meat, that flies actually deposit their eggs in them by mistake; Arum trifidum has an abominable stercoraceous odour; and the pollen of the Sweet Chesnut and the Barberry has a peculiarly disagreeable smell. Even the most delicate kinds of fragrance when concentrated prove disagreeable, and in many cases, in their simple state, act powerfully upon the nerves; even oil of Roses highly concentrated can scarcely be supported, and every one knows that a perfumer's shop although the receptacle of the sweetest essences, is by no means an agreeable place. The spasmodic affections produced by the odours of flowers are more common than is generally supposed, but vary in different individuals according to their respective powers of endurance. Some of the most remarkable cases are the following: — The Jonquil and the Tuberose are insupportable by persons of delicate nerves; few can bear the fragrance of the Lilac, especially in a room; even Violet, the last flowers to be suspected, have in many cases proved deleterious; De Candolle says he has witnessed many ladies faint from carrying too many of them on their persons, or from having placed them too near them when asleep. It is asserted that people have died from being shut up in a room in which the Oleander was in flower; hysterics have been brought on by the Musk Mallow; Saffron has been known to produce swooning; and the flowers of Lobelia longiflora have caused suffocation. The odours of other organs may also produce inconvenient consequences: the Elder, the Walnut, aud the Anagyris bring on headache in persons who sleep beneath their shade; and the Manchineel tree is said to prove fatal to travellers who have trusted to its shelter.

Vague and unsatisfactory as all these details must be admitted to be, they are so connected with one of the most curious inquiries in either the vegetable or animal kingdom, that we think we cannot have done otherwise than render good servies to our readers by letting them form a part of this treatise, especially as they are scarcely to be found adverted to in our English elementary works; and we close what relates to the physiology of plants, by strongly recommending the investigation of the subject to all those whose tastes, leisure, and attainments may lead them to occupy themselves with one of the richest field of inquiry which yet remain in nature to be explored. — *Lib. of Useful Knowledge.*

## ELECTRICITY AND CONDUCTORS.

ROXBURY, JULY 23, 1835.

MY DEAR SIR, — Among the various sciences and arts which it is indispensable should be understood by the cultivators of the soil, that of Electricity, and the means of being placed in security during the tremendous thunder storms, which so frequently pass over the country, are of peculiar interest to them; for, from the many, often large, and the exposed position of the edifices, which constitute the farmer's and other rural establishments, they are constanly subject to most disastrous consequences, from the want of, or owing to, the imperfection of the lightning rods. I have, therefore, thought that a communication on those subjects, would not be out of place in a horticultural journal, and submit the following for publication, in that which has been so ably conducted under your coöperation, as one of the editors, and rendered valuable by the numerous interesting contributions which you have furnished.

Very respectfully, your most obedient servant,

H. A. S. DEARBORN.

J. E. TESCHEMACHER, Esq.

AN article has recently been published in several of the Boston papers, on lightning and conductors, which demands serious attention. Three instances are stated, in which edifices have been injured by lightning, although furnished with conductors, and the writer infers, that it was in consequence of the rods being *round*. He further states that silver points, glass fastenings, and surrounding the lower extremity of the rod with charcoal, "are of no use whatever," and that such round rods do not afford sufficient protection, but "that square rods with the rough, numerous points, and sharp corners, most effectually protect a building."

There is such a commixture of fact and conjecture, of error and truth, and of illustration and obscurity in his statements of the philosophical principles of electricity, and their practical utility, as well as in his solution of the causes of the injuries to the buildings which he examined, that it may be well to state, what is now considered among scientific men, as the true theory, and the most approved application of it, in the construction of electrical conductors, and the manner of erecting them.

1. Electricity is not only received and discharged by a metallic

point, more readily than by any other substance or form, but what is of greater importance, without an explosion.

2. The electrical fluid does not pass on the outside of the rod, merely, but through the whole mass of the metal, like heat.

3. Buildings are not always saved from destruction, in consequence of a flash of lightning being conducted into the earth by a rod; but whenever clouds, charged with electricity, are floating in the air, a constant stream of that fluid is silently passing down the rod, like water through a tube, and the threatening storm is thus invisibly and noiselessly disarmed of its terrors, by the ingenious and wonderful discovery of the illustrious Franklin.

4. Conductors should not only be of sufficient size, to transmit the largest flash of lightning without being melted, but to insure the free and uninterrupted passage of the electricity, and therefore the rod should be of one continuous piece, or so united, if in parts, as to render it in the nearest possible degree, as homogeneous and compact as a solid rod.

5. That the electricity may escape rapidly from the conductor, and without a shock, the lower end should be pointed as well as the top.

6. As metallic oxides, or rust, are nearly complete non-conductors, it is indispensable that the pointed ends of the rods should be protected from oxidination by being covered with gold or silver, so as to render them, at all times, perfect recipients and conductors of the electrical fluid. This precaution is a sine qua non, for no rod, not thus prepared can be relied upon for protection, against the fury of a thunder-storm.

7. The conducting power of metals, is in proportion to their purity or inoxidability, and have been ranked in the order of their perfection, as follows, viz. gold, silver, copper, platina, brass, iron, tin, lead.

For a conductor, copper is preferable to iron, as the material, being less liable to destruction by rust or fusion, and possessing also a greater conducting power.

The rod should be at least three fourths of an inch in diameter; and it is a most important condition in the structure, to give it the best protecting character — that no interruption should exist, in its continunity, from top to bottom. It may be formed of such round bars as are rolled down for ship-bolts. The pieces should be brazed together, or united by male and female screws, at the alternate ends,

at least an inch long, and in diameter, half that of the bars. The upper and lower ends to be pointed, in the form, and of the length of a musket bayonet, which must be plated with silver or gold, for some three or four inches at their extremities. Gilding is not sufficient, as it is liable to be removed or fused.

If iron rods are used, they should be united like those of copper, with similar formed points and plated in the same manner; but it would be better that three feet of the upper end of the conductor should be formed of copper; and as the lower end must be inserted in the earth, it should not be of iron, for it would in time become a mass of rust, save the plated point, and ultimately be separated from the portion of the rod above the ground, which would render the conductor not merely useless, but extremely dangerous. It would operate like a train of powder to a magazine, and receive the flash from a thunder-cloud, but to be expended in the midst of the edifice, in an explosion of devastation and death. It is therefore earnestly recommended, that all that portion of the rod which is buried in the earth, and for a foot at least above the surface, should be of copper. All the iron part of the rod should be covered with a lacker, which would best protect it from rusting, and for the longest time. The lead work, metallic gutters and spouts, and all masses of iron or other metal which are exposed, should be connected with the conductor, by lateral rods, or strips of sheet copper or tin.

9. As it has been ascertained that a conductor will not protect a greater portion of a building than a circle, whose radius is equal to twice the height of the rod above the roof, the more lofty the point the greater is the security. In other words, if the top of the conductor is ten feet above the ridge-pole, it will guard an area forty feet in diameter. On large dwelling-houses, barns, and public edifices, there should be two or more, and so arranged that their united heights will extend their influence beyond the bounds of the building; and when but one is used it should rise from the centre of the roof, and to an elevation so great, that twice its height above, will furnish the measure of a radius, sufficiently long, to describe a circle which will include the whole edifice. Notwithstanding this very important condition, in the erection of conductors, how very few rise sufficiently high, to protect even a quarter part of the building to which they are attached.

10. The rods should be isolated from the edifice several inches, by fastenings which are non-conductors. Glass articles for this

purpose have been manufactured, but if not easily obtained, the necks of bottles may be inserted in wooden supports as substitutes.

11. When the earth is dry, its conducting power is much diminished, and as silicious and argilaceous stones, which almost universally pervade the soil of New England, are non-conductors, in proportion to their hardness, while water is a good conductor of electricity, it is necessary that the lower end of the rod, should either be extended to a body of water, or sunk so deep in the ground as to be constantly in the midst of moisture, that the electricity may be rapidly diffused. At least six feet is required for this purpose, and the rod should be bent at such an angle, near the foundation of the edifice, as that the point will be seven or eight feet distant therefrom, in a horizontal line.

12. As an additional security, it has been recommended, by many distinguished European writers, on the construction and best mode of placing lightning rods, that an excavation be made some five or seven feet in depth and four or five in diameter, which is to be nearly filled with charcoal, as a receptacle for the lower end of the rod; for charcoal being a conductor, insures the diffusion of the electrical fluid.

13. The nail rods which have been recommended, with their numerous points and rough edges, as well calculated to afford protection, is specious in theory, and may answer the purpose of conductors, for a short time, but when they become rusted at their extremities, which will speedily be the case, they will cease to receive and guide off the electricity, and become not only insufficient, but may be even fatal appendages to an edifice.

From numerous experiments made in England, France, Germany, Switzerland and Italy, and from the concurrent opinions of the most eminent authors, who have illustrated the science of electricity, there is no security in the midst of a thunder-storm, unless all the conditions which have been named, in the structure and placing a conductor are attended to in the most particular manner.

As a conductor should be as durable as the edifice to which it is attached, and at all times perfect in every part, the additional expense of a good and complete rod, of the best and most approved materials can be of no moment, when the disastrous consequences which may result from a cheap and inefficient one are considered. When made, let it be in the best manner, so as never to require repairs, or to be replaced, for an imperfect conductor is worse than none.

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The causes which render most of the conductors, which have been put up in this country, either useless or dangerous to the buildings to which they are attached, are mainly the three following :

1. When the upper point of the rod is not protected by gold or silver, they soon become rusted, which renders them non-conductors, and consequently cannot receive the electrical fluid.

2. When the conductor is formed of pieces and are united, as is the common mode, by eyes or rings, at the ends, they either are not in contact, or become so rusted as to interrupt the passage of the electricity, and it leaps to some metallic substance in the vicinity, by which it is directed into the building, or it expends its force in some other injurious manner.

3. When the lower end of the conductor is not terminated by a point covered with gold or silver, but is of iron and blunt, the whole of that portion either becomes a mass of rust, or is so incrusted with it, that the fluid cannot escape into the earth, and it leaves the rod when fully charged, at the weakest place, or is guided off by some attracting medium, by which it is carried into the edifice, where it often divides, and produces disastrous, if not fatal consequences, from a double or triple explosion.

It was the second or third named defects in the conductors of Professor Palfrey's dwelling house in Cambridge, and of the meeting houses in Brighton and Braintree, which occasioned the damage to those edifices, on the thirteenth of June. In the last case, from the earth about the lower end of the conductor having been disturbed by the shock, it is evident that the cause of the explosion, was the third named defect in the rod; and besides, it is probable that it did not extend sufficiently deep into the earth, or far enough from the foundation, so that the charge could leave the rod with facility, and without endangering the building.

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## EXTRACTS FROM FOREIGN PUBLICATIONS.

Loudon's Gardener's Magazine, for June, 1835, contains a continuation of the observations on gardening in Belgium.

An article doubting the results of the experiments of Macaire and others on the excretions of plants, which we like to see as promoting discussion on the subject, but the arguments in which appear to us easily answerable.

There are several other interesting notices and papers which our limits will not allow us to offer to our readers at present.

PAXTON'S HORTICULTURAL REGISTER, *conducted by James Maine; London.* The anticipation in our last number that this work would be ably conducted under its new editor, has been realised in its fullest extent. There is not a paper without considerable interest and information, part of which we convey to our readers with little more preface.

The first article is *On the Effects of Situation and Exposure on different kinds of Plants.*

Having ourselves prepared an article, *On the Climate of New England as adapted to Horticulture,* which we shall probably communicate to our readers at some future period, the subject under discussion has employed our thoughts and attention for some time past; and both our experience and reasoning correspond remarkably with those in the following extracts; it is almost needless to add that we think them of the greatest importance both to the farmer and the horticulturist.

"If we happen to be acquainted with the native *habitat* (place of growth) of a plant we can judge pretty accurately what place it is most likely to thrive in.

"Tropical plants we place in a stove or conservatory. Australian, Chinese, South African, and South European, in the greenhouse, those from the north of Asia, Europe, or America, anywhere in the open air; this is a natural way of proceeding, but not always right in its application; some tropical plants are killed by being placed in a stove, because it is not so much the latitude from whence they are brought, as the elevation of their native habitat above the level of the sea, which determines their hardiness. We often fail in preserving tender plants from inattention to local circumstances, we are liable to mistake shelter for warmth.

"Cold or rather cold air is always most intense in humid situations, because there is the most copious evaporation; such situations are either the tops of clayey hills, or the lowest valleys, where there is either a lake, river or brook. These low grounds are nearer the main springs, and often abound with them, from whence exhalations are ever rising though imperceptible; of course such a valley must be more chilly, and always more exposed to keen frosts than a drier or more elevated situation. Such glens provided they are open to the south are often chosen as the most suitable for tender exotics merely because they are sheltered from the northern blast. In the summer indeed such a lo-

cality is more favorable to the quick and strong growth of every plant; the air being generally calm and moist, conduces to vigorous expansion, and the very coolness of a summer day or night as is felt in such places is most propitious to luxuriant vegetation. These circumstances instead of being favorable to tender exotics, have a directly contrary effect, the summer excitement only renders them less able to bear the frosts which fall upon them with redoubled intensity in the winter; and instead of the slow and sturdy growth which would have happened to a plant on a dry and breezy hill or on a northern aspect, we have an enfeebled nursling unfit to bear the rigors of the climate from sheer mismanagement. These facts are important not altogether for the sake of naturalising exotic plants, but for fixing on the sites for gardens and orchards, which if misplaced at first, ever after give cause for regret.

"Not only do the exhalations from a moist valley generate cold, but the cold air which descends upon the hills after sunset is said to *slide down and settle in the lowest place.* So firmly is this believed and acted upon by a well known horticultural philosopher, John Williams, Esq. of Pitmaston near Worcester, that when a garden is made on ground sloping to the south, that gentleman invariably advises the lowest boundary to be a hedge — or if a wall, that it be raised on grated arches high enough to allow the escape of the cold fleece of air accumulated within the garden. On the same principle whatever may be the aspect, the upper boundary wall should be high and close, to intercept the descending current and divert it round the ends.

"There is another circumstance which operates on tender plants in sunny and sheltered valleys; they are sooner affected by the returning warmth and solar beams of spring, and hurried into a premature growth long before frosts are over or the summer temperature confirmed.

"The native plants of the frosty region of Siberia suffer greatly from the late frosts when introduced into British gardens, not from the severity of the season when compared with their own, but entirely from the changeableness of the former. In Siberia the winter sets in at once and the ground is soon covered with snow, every vegetable becomes instantly torpid, and in this state remains in perfect safety till the return of spring, or rather summer, for there is scarcely any spring in that northern clime, no intermission of mildness to excite, and frosts to destroy, the tender plants as is often experienced in this country.

"Mr Anderson, curator of the botanic garden at Chelsea, has in his collection of the genus Iris, several from Siberia which require peculiar management to see them in their beauty: as soon as a bright day in February warms the ground, forth come these humble gems of the north, and without some protection they would be withered by the first frosty night.

"Exposed situations on the north side of a hill on poor and dry, rather than on moist and rich soil are certainly the most eligible stations for making a trial of the constitution of a plant."

[These remarks apply to Morus multicaulis, which is now under anxious cultivation as food of the silk worm. — Ed.]

The second article is *Remarks on the different means employed for heating horticultural buildings by steam and hot water.* This is an interesting paper on a subject we propose to discourse largely on in our next, as we do not entertain a doubt but that very soon every building inhabited either by man or plants will be warmed on the system of hot water.

It does not require any sagacity to foretell a large profit to the first grate manufacturer who undertakes to heat houses by this means. The expense of fuel would not exceed one sixth of the ordinary consumption, while the whole dust and dirt of fires are avoided. Having practically examined almost every plan mentioned in the above paper we have no hesitation in stating this as our firm belief.

Article third is *On the cultivation of water cresses.* We have merely room to state our coincidence in the remarks that the sanetory virtues ascribed to this vegetable have long made it valued as a salad plant.

Article fourth is *On the practicability of improving Culinary Vegetables.* We cannot omit giving some extracts from this paper which is one of value to the farmer.

"The wild cabbage, carrot, parsnip and potato, are all plants of little value, but since their domestication by continued cultivation and the application of practical skill, &c. they have become of great importance as forming a considerable portion of the food of man.

"That the most of our new and superior varieties have originated accidentally is a well known fact, because it is only of late years that the doctrine of the hybridisation of plants has been so well understood, practically proved and explained. — This doctrine is now very generally known, already has it been of the greatest service to florists and orchardists, and even farmers are partaking of the benefit of cross impreg-

nation, by gaining superior sorts of corn and forage plants for cattle. Hence it naturally occurs to every one who considers what has already resulted from chance in our present improved stock of cultivated vegetables, why may not many of them be still further improved by manual assistance.

"It has just been announced in the Quarterly Journal of Agriculture that a new hybrid turnip has been raised by J. Wright, Esq. of Perthshire, and that a new variety of barley has been detected and cultivated for three years by the intelligent Mr Gorrie of Annat, in the same county."

From an article *On the various form and character of Arbours as objects of use or ornament either in gardens or wild scenery*, we extract the following passages.

"A singularly beautiful structure which may be classed with this kind of garden decoration has been made in Ireland.

"A circular space of about sixty feet diameter, in the centre of dressed ground with scattered clumps of evergreen shrubs, surrounded by lofty trees, is wholly enclosed by a continued arcade of iron arches, each about five feet wide by ten feet high formed of 7-8 inch round iron wire. The arches are Saxon gothic, and from the top of each proceeds a slight copper wire to the summit of a pole in the centre of the circle about thirty feet in height, so that as now described the whole presents the appearance of a skeleton circular pavilion of arches covered by a tent like roof of the copper wire festoon. All the arches are thickly covered with climbing plants of strong rapid growth, which proceed along the wires to the top of the pole. Many of these are climbing roses, and the external appearance of the whole, covered with a profuse variety of luxuriant climbers interlacing and mingling their flowers and foliage is exceedingly imposing.

"The interior is an arbor of great magnitude, not so closely covered as everywhere absolutely to exclude the sun, but yet so as to render it always shady and agreeable. In the centre a cooling fountain, where a group of nymphs support the pole, sends forth four jets d'eau, which drop with delicious murmurs into a marble basin.

"The closely shaven turf comes about ten feet inside the arches where its edge is cut, and between that and the basin is covered with a fine tawny sand, with an apparently confused but really symmetrical arrangement of marble pedestals, seats and vases with flowering plants placed upon them. During summer a vase with a rare flowering plant is placed under each of the external arches exept four which serve as

entrances. The entire effect is good, and this may be considered as one of the best specimens of the artificial bower of the present day."

G. T. Dale of Warkworth, Derbyshire, recommends for dahlias the following compound: strong loam, leaf soil, fresh turf soil, and river sand, one fourth of each, and on no account strong manure. When the flowering season is over, cover the roots with sand till you take them up on some fine day, carefully remove all earth from the roots and place them on dry shelves in sand secure from the frost.

The producing of a succession of roses is effected by a double course of pruning; thus, in autumn prune every shoot to five or six buds, and in May when these buds have made shoots an inch or more in length, prune away the upper shoots, the lower ones will push forward but produce flowers nearly a month later than those left unpruned; thus a succession is attained. J. E. T.

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## FOREIGN ITEMS.

At the meeting of the London Horticultural Society in May, a number of beautiful flowers were exhibited; among them a North American plant called the *Ladies' Slipper* (Cypripedium, the variety not mentioned); it is the most brilliant plant that has ever been brought to England.

Some remarks were made by Mr Lindley on the transportation of seed; it appears that seeds brought over land were rarely or never injured, while those brought by sea were very much deteriorated; seeds which had been sent to England over land from California by the late lamented Mr Douglas, were very productive, although they were three years on their passage; others sent by sea although only half this time on the voyage, turned out almost worthless.—*Eng. pa.*

The June meeting of the society took place in their garden on the fourth, two tents were erected under which were displayed the fruit and flowers; the number of the former was rather limited, but the exhibition of the flowers is described as having been extremely brilliant.

Three gold Banksian medals were adjudged to J. Willmot, for fine miscellaneous fruit. (Willmot's superb strawberry, is well known here.) To Messrs Rollison of Tooting, nurserymen for orchideous plants, and to Mrs Lawrence for miscellaneous flowers. Seven large silver and twenty Banksian silver medals were also adjudged —

among the successful competitors were two for fine Heartsease; two for Calceolarias; one for Cockscombs and Balsams; one for Pelargonium; one for Cypripedium calceolus; one for Roses; one for Brugmansia arborea, &c. &c.

We should be glad to give notices of the transactions of every Horticultural Society in the Union if we could obtain them.

A gentleman in Northampton, England, has tried the experiment of growing the oak by suspending an acorn in water in a hyacinth glass on the mantelpiece in his parlor, which was attended with complete success. It was placed there towards the end of November, the germ made its appearance in January, the stem is now nine inches in length and covered with leaves; the root is very curious, and the fibres numerous. Within the last few weeks the water which had hitherto retained its clearness, has become of a bright brown color; it forms a curious and at the same time a beautiful ornament.

J. E. T.

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## FARMERS' LIBRARY.

We have on our table three volumes of the Farmers' Library,

Vol. I. *The New American Gardener*, 10th edition, by T. G. Fessenden.

Vol. II. *The New American Orchardist*, 2d edition, by William Kenrick.

Vol. III. *The Complete Farmer*, 2d edition, by T. G. Fessenden.

It may appear superfluous for us to remark upon the labors of our assiduous co-editor, on which the demand for successive editions has already stamped the unequivocal impress of public approbation. We had rather leave this delicate task to the pen of the judicious Loudon, editor of the London Gardener's Magazine, who leads us to believe that he has condensed into his work the most valuable portions of the experience and labor of the practised agriculturist and gardener in Europe as well as of America. Those who expect novelty in works of pure fiction and imagination are often deceived, and those who expect it on a subject which has engaged the unwearied attention of a large portion of mankind since our first parent Adam, expect not wisely. On this, whoever is able, unfettered by the trammels of prejudice, to offer the fair results arrived at by those who have the necessary ex-

perience, offers that which is most conducive to utility — and we apprehend that every farmer who is ambitious of cultivating his land on the most approved principles will not fail to add these three volumes to his stock of books.

With respect to the second volume by Mr Kenrick, we may be expected to speak without bias, and our first observation is to quarrel with him for omitting the Tupelo tree in his list of ornamental trees. It grows plentifully in this neighborhood; near Cohasset there are some magnificent specimens: it is certainly one of the finest ornaments of the American forest.

We have bestowed some pains in comparing his list and descriptions of orchard fruits with the best authorities, and have no hesitation in pronouncing them correct, so that this work may always be referred to by the farmer with perfect confidence. The introduction, which contains remarks on the routine of cultivation, pruning, grafting, insects, &c. &c. is written in a remarkably clear and plain style exactly fitted for the work. We extract the section on modern or landscape gardening.

"In northern latitudes, the location of a garden should be, if practicable, on the south side of a hill. Or it may be screened on the cold quarters, either by hills, or by dense and deep borders of evergreen and other forest trees, intermixed with fruit trees and shrubs of ornament. An undulating surface is by all means to be preferred, and water should not be wanting.

"The art of *Modern Gardening*, is to form a landscape the most beautiful. Nature having drawn the outline, art must accomplish the rest. Art itself being subservient, or so far concealed, as that all may appear the work of nature alone. Wall and boundary fences should be demolished, or so far as possible concealed. The *ha-ha* is a concealed wall, constructed in the bottom of a dry ditch, and rising no higher than the surface of the earth. Straight lines and right lined walks are to be avoided; and in their stead devious lines only are adopted; — the serpentine, or the gentle waving lines, which bring continual and agreeable change. Striking and agreeable objects in the landscape, whether near or more remote, should be brought frequently, and sometimes suddenly into open view; while unpleasant objects, should from all conspicuous points, be masked from the sight, by shrubbery or by trees. To the hills an artificial elevation may be given by planting their summits with the stateliest trees. And depth is preserved to the valleys, by converting them to lawns. Views of water, it must not be forgotten, are essential to the perfect landscape.

"The first garden, of which we have any account on record, was planted by the Almighty, 'Eastward in Eden,' and in it, every tree that was pleasant to the eye, or useful for food. Out of Eden went a river, which watered the garden; and from thence it was parted into four heads. 1st. Pison, on the side of Havilah. 2d. Gihon, on the side of Ethiopia. 3d. Hiddekel, towards Assyria. 4th. The Euphrates.

"The modern style of gardening, in the place of the regular geometric forms, and the right angles, and right lines has substituted all that is more consistent with nature, and with beauty."

Some considerable portion is devoted to the interesting subject of the Mulberry Plantations and the Silkworm, which are probably destined to become staple articles of produce in this country, on the soil and situation of which he observes:

"Although the mulberry flourishes most luxuriantly in a moist and rich soil, and protected situation, yet the leaves which are produced in such soils, are more crude, and not of a quality so nourishing. The growth of the tree, in such soils and exposition, besides being more rapid, is prolonged to a later period in autumn, or until the tender and yet vegetating tips of the twigs are suddenly arrested by the frost; the immature wood of a forced growth being more tender, is consequently more liable to be killed by early frosts and by winter. Such appears to have been the case in the winter of 1831-2, which destroyed so many full grown trees of the hardiest description, even to the root. The ravages of that destructive winter seem to have been confined to particular situations and soils; — to the productions of the forced growth of a summer not less uncommon and extraordinary.

"Authors seem fully agreed that the most suitable soils for the mulberry tree, are '*dry, sandy or stony.*' And trees growing on '*dry, sandy, or stony soils,*' and situated on the open plains, and on hills the most exposed to cold winds, will be found to suffer least from the destructive frosts of autumn and of winter."

Mr Kenrick having raised a large quantity of the plants of Morus multicaulis, what he writes must be considered as good information on this point.

In conclusion we can safely recommend the whole work as fully entitled to its appellation, "The Farmers' Library."

J. E. T.

## ON FLOWERS THE MORE GENERAL INTRODUCTION OF WHICH INTO THE UNITED STATES WOULD BE DESIRABLE.

[Continued from our last.]

*Bauera rubiæfolia, icosandria, trigynia, and Bauerœ*, so named in honor of the Messrs Bauer, celebrated botanical draughtsmen. A woody green-house plant; flowers of an extremely lively rose color, from New Holland, desirable for lasting in flower nearly all the year; it is rather hardy and cuttings will strike under a glass in sand but take five to seven months before they are fit to move into separate pots. An equal mixture of sandy loam and peat is the best for it. The pots should be well drained.

*Lachenalia pendula*, a bulb from the Cape of Good Hope.

*L. tricolor* is not uncommon here, but *L. pendula* we have never yet seen. The flower and plant is altogether larger than tricolor, color scarlet; it is the most showy of the tribe, blossoms early, say, March, April and May; like many of these bulbs it is best taken up when the leaves have withered, and re-potted in the autumn, in sandy peat with a little loam.

*Lachenalia fragrans* is also desirable but rather difficnlt to obtain.

*Ixia*, also a cape bulb. Almost all the Ixia tribe are beautiful. We have seen many here, but not *I. viridiflora*, which is most elegant when well grown. The color is one very uncommom among flowers, a bright bluish decided green, with a dark eye. To the same tribe belong those delightful plants, Sparaxis, Watsonia, Patersonia, Streptanthera, and many others. Streptanthera elegans is particularly beautiful and deserves room in every green-house.

*Buddlea globosa* was formerly a green-house plant in England, but now endures the winter in the open air. The branches are however sometimes killed down in severe winters; it would therefore be more proper for the green-house in this country.

The foliage is elegantly veined, the upper side of the leaves being bright green, the underside white. Flowers in dense globular clusters of a bright orange which contrast beautifully with the varied color of the leaves.

*Chironia, fructicosa and angustifolia*, from the Cape of Good Hope — of the same tribe as the Gentian. The flowers are of a bright rose color and the petals a fine polished surface; an elegant peculiarity of this flower is the spirally twisted, yellow anther. These plants flower early, and are very lively inmates of the green-house. They require rather dry and airy treatment, and are

apt to rot if overwatered. Cuttings strike in sand, and if the plant is kept tolerably dry, the seed will ripen, and should be sown immediately in light sandy earth.

*Crowea saligna, decandria, monogynia amd rutacæ*, the family of the Rue — named after James Crowea an excellent English bótanist. There are only two varieties, *C. saligna*, and *C. latifolia*, both from New Holland. They are very beautiful woody plants; the flowers rather large, spreading, of a fine pink color; the branches are slender, the foliage elegant; altogether they are exceedingly ornamental to the green-house. Cuttings are rather difficult to strike and sometimes require twelve months before they send out roots, the foliage remaining all the time green and lively. Like most woody plants they should be struck in sand with a glass cover, the best soil for them afterwards is sandy loam and peat — they require plenty of air and do not thrive if too much crowded among other plants.

*Witsenia corymbosa*, one of the Iris tribe (*Irideæ*); of a most charming azure blue. It flowers during the winter season and its lovely corymbs form a fine contrast to the yellow which abounds in the conservatory at this time; it is rather difficult to propagate and therefore keeps up a high price in Europe; 5*s*. to 7*s*. 6*d*. being the value of a good plant; but it it is worth all that is asked for it.

*Nerine sarniensis*. The Guernsey lily, a bulb bearing a cluster of flowers in the autumn prior to the appearance of the leaves. Large quantities of these are annually imported into England from Guernsey. It is said they only blossom once in three years. Those imported however always have blooms. As the flower only appears in the autumn, the leaves which shoot out afterwards do not attain sufficient perfection to nourish the bulb for flowering the succeeding year, it is therefore only after one or two seasons engaged in ripening the leaves that the bulb attains sufficient strength to throw up a spike, which is however, extremely beautiful. Sandy peat is the proper soil.

*Canna iridæflora*. This magnificent plant was raised by B. A. Lambert, Esq., from seeds found in the celebrated Peruvian Herbarium of Ruiz and Pavon, which was purchased by him at a princely price.

The flowers are large, in thick nodding clusters, and of a bright hyacinthine purple; the plant is of a stately growth, the cultivation not difficult, being the same as of other Cannæ; it is a splendid ornament to the conservatory, and not very difficult to be obtained.

HARDY.

*Orobus vernus, leguminosæ,* and *diadelphia decandria,* the spring bitter vetch. Very early flowering, flowers large, handsome, singular in the different shades of colors, the upper part of the large petal (*Vexillum*) is purple with blood red veins, the wings are blue, the keel blue, tinged with green, the color changes as the flower advances, which becomes finally altogether blue. *O. formosus* is also beautiful, a native of Mount Caucassus; flowers large, fine purple. *O. Fischeri* is another handsome purple species. I sowed seeds of this latter, but not one has yet vegetated. *O. tuberosus,* a native of England is also of a fine species, remarkable for its tuberous root, which the Scotch Highlanders chew when dried to give a good flavor to their whiskey; they also assert that by the use of them they are enabled to bear hunger and thirst for a longer time without suffering. In Holland and Flanders they are dried, roasted and served at table like chesnuts. In England the plant is called the *Wood Pea* or *Heath Pea.* Several other species are well deserving notice, they are easily propagated by dividing at the root or by seed. A sandy soil suits them best.

*Primula farinosa,* an elegant and rare plant, native of swamps in England; the flower though lively is small, but the under side of the foliage is covered with a white powder resembling flour, which has a beautiful appearance. J. E. T.

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## MISCELLANEOUS ARTICLES.

COLLECTED BY T. G. F.

HARD WATER FOR IRRIGATION.—In Parke's Chemical Essays, page 9, it is asserted, that according to Dr Home, "hard water promotes the growth of plants in a much greater degree than soft water." Sir John Sinclair observes, "In regard to waters much impregnated with iron, they were supposed totally unfit for the purposes of irrigation; but it is now fully proved, by the accurate experiments of an able chemist, and by the extraordinary growth of grasses in Prisley meadow in Bedfordshire that ferruginous waters are friendly to vegetation, when properly applied." We believe that many if not the greater part of what we call *hard* waters in this country are rendered

unfit for washing by being impregnated with gypsum, [plaster of Paris] and are the more fit for irrigation from the very circumstance which causes them to be improper for bleaching, the use of the dyer, and for culinary purposes.

NEW METHOD OF MAKING JELLY.—Press the juice from the fruit; add the proper proportion of sugar, and stir the juice and sugar till the sugar is completely melted: put it into jars, and in twentyfour hours it will become of a proper consistency. By this means, the trouble of boiling is avoided, and the jelly retains more completely the flavor of the fruit. Care should be taken to stir the mixture till it is completely melted, and fine sugar should be used.—*New Jersey Advocate.*

PRESERVATION OF APPLES.—Apples may be kept all the year round by being immersed in corn [grain] which receives no injury from the contact. If the American apples were placed among grain, they would arrive here in much finer condition. In Portugal, it is customary to have a small ledge in every apartment (immediately under the cornice) barely wide enough to hold an apple; in this way the ceilings are fringed with fruits, which are not easily got at without a ladder, while one glance of the eye serves to show if any depredations have been committed.—*Brande's Quar. Jour.*

A GARDEN, under a proper system, is a most valuable acquisition to a farmer, with a view both to comfort and economy. Many culinary articles may be obtained from a well cultivated and sheltered garden, which cannot be raised in the field, or will not grow in exposed situations, with equal luxuriance and perfection. Attention should be paid to the sowing of different articles at various seasons, by which an earlier and a more equal, as well as a more regular supply for the table may be obtained. It is of no use to employ a piece of ground in a garden for raising cabbages, Swedish turnips and other plants, to be afterwards transplanted into the fields. The refuse of the garden may be given to advantage to pigs and milch cows. At the same time, working in the garden should always be considered of inferior consideration to the business of the farm; and on no account ought the farmer's attention to be drawn off from his crops of grain and grass.

## GARDENER'S WORK FOR AUGUST.

*Turnips.* The first week of this month will answer very well for sowing turnips for autumn and winter use either in the garden or the field. M'Mahon says "you may continue in the middle states to sow turnips as opportunity offers, or as the season proves favorable till the middle of the month, after which it will be too late to expect tolerable produce. In the eastern states the last sowing ought to be performed in the first week of this month, and the earlier in that the better. If any be sown after the above periods, it ought to be the early Dutch kind; this will arrive at maturity at an earlier period than any other sort." For directions see Horticultural Register for July, pp. 277, 278. Pull up the haulm of peas, beans, &c. and remove it to your compost bed, bury it between rows of plants, or throw it together with all weeds, &c. and thus give a neat appearance to your premises. Cut such herbs as are now in flower, to distil or to dry for winter use, being careful to do it when dry, and to spread them in a dry place in the shade; for if they are dried in the sun they will shrink, turn black and prove of but little value. Do not permit the seeds of weeds to ripen on any part of your premises, particularly your dung-hills and carrot beds, for if the seeds are permitted to ripen and fall, the dung when carried into the garden will disseminate innumerable weeds. Attend to plants set out for seeds, and when necessary support them by stakes. Continue to earth up advancing crops of celery, once in twelve or fourteen days, taking a dry day for the operation. Break the earth fine with a spade before it is drawn up to the plants, and take care to gather up the leaves, neatly and not to bury the hearts of the plants. In the fore part of the month you may sow succession crops of peas. Mr Armstrong observed, "after the earth takes a temperature favorable to vegetation, your pea sowings should be made once a fortnight, till the middle of August to keep up a regular and successive supply." For sowing in August, M'Mahon recommends the Early Frame, Golden, or Charlton hot spur peas, which, should the season prove favorable, will afford tolerable crops in September. In order to prevent mildew in peas Mr Knight recommends to "give water profusely once a week or nine days even if the weather proves showery." Keep your melon and cucumber vines properly clear of weeds, and you will thus encourage the growth and improve the flavor of the fruit. Some English gardeners advise to place a flat tile or

slate under each melon to prevent it from the dampness of the earth. The substance thus interposed will assist, it is said, the fruit to ripen, by reflecting the sun's rays. Whether a bed of tile or slate would prove too warm for the melon in our climate, we cannot say. Perhaps shingles or boards would be preferable, as they would not be rendered so hot by the noon day sun, nor so cold by the night air. At any time before the middle of the month you may plant a crop of early dwarf kidney beans; should the ground and weather be dry at the time, the drills or hills should be watered, and the beans soaked in soft water four or five hours before planting. Continue to collect and preserve seeds as directed last month.

Fruit Garden and Orchard. Preserve peach, plum, cherry and apricot stones, &c. to sow for raising stocks to graft on. These may either be sown immediately, or kept in common garden earth or moist sand. But it is necessary to sow them before the stones open, and the radicles begin to shoot; otherwise many of them will be broken or torn in the process of sowing. Every day they are kept out of ground is an injury to them; and if they remain in a dry state till spring very few will vegetate till a year after, and the greater number not at all. Attend to new budded trees. Look over the stocks which were budded in July, and, in three weeks, or at most a month after their being worked, loosen the bandages, lest the buds should be pinched; and where there are any shoots produced below the buds they should be rubbed off. Examine also the trees which were budded the year preceding, or grafted in the spring, and cut off all the shoots that are produced beneath the inoculations or grafts, lest they starve the grafted shoots. Such of your fruit trees as are heavily laden with fruit should be supported with substantial stakes, to which the pending branches should be bound with strong hay-bands, or some other soft ligaments.

*Vineyard.* Train up and tie to the poles such vines as would otherwise trail on the ground, and keep the ground free from weeds. Divest the main shoots of all young side productions, but be careful not to injure the leaves.

*Nursery.* In dry weather give frequent waterings to seedling trees, shrubs and plants, and keep the ground loose and free from weeds. The general directions for last month will apply to this. See pages 279, 280.

## WORK IN THE FLOWER GARDEN FOR JULY.

The following, accidentally omitted in our last, we insert here, in order to make the season's work complete.

Cut off the flower stems of annuals and perennials soon after they have passed their day of perfection. This will encourage the plant to send up fresh spikes of flowers for the autumn, and be quite equivalent to a succession crop and keep the garden gay until the frost; those who intend to save seed should tie up their choice flowers for this purpose, and take the first that is ripe. That which ripens late is more liable to mildew, and the juices of the seed are not so concentrated.

Balsams, cockscombs, and other tender annuals, should now be repotted for the last time, and when required of extraordinary size should be kept moist, occasionally have liquid manure, and always as much heat as can be conveniently given, the Balsam will thrive better for this assistance.

The latter end of the month sow a few Schizanthus, to take into the house on the approach of frost. Some other annuals may be treated in the same manner.

The Dahlias will now require considerable attention and address, in tying up, to protect them from being broken by high winds.

About the middle and latter end of the month, commence laying carnations, and piping pinks, also make cuttings of all plants as soon as they have done flowering. Lay the summer shoots of ornamental plants, as magnolia, rhododendron, kalmia; observing that it is better in performing this operation, to cut the shoot half through on the upper side, and give it a twist when pegging it down in the earth, so that the wound may granulate and throw out roots. There is less risk of its breaking off than in the old way of cutting on the under surface.

Choice tulips, and other bulbs of which the leaves have turned brown, and which require to be kept in the house, may now be taken up; the stems of Crown Imperial, and such as are destined to remain in the ground all winter, should be cut off, and labels placed to mark the spot. Their places may be filled up with China aster, or other autumnal annuals whose roots do not go deep into the earth. These in addition to their beauty will perform the service of concealing the labels, which, in their most unobtrusive form always sin against taste.

## WORK IN THE FLOWER GARDEN FOR AUGUST.

The principal work is to keep the garden neat and free from weeds; cut off the seed stalks of flowers both perennial and annual as the blossoms fade, this will probably give a second crop of flowers late in the autumn, if the absence of frost permit. Take up all bulbs of which the leaves have withered, place marks to all deciduous flowers before the stems totally disappear, that you may know where they are when the beds are dressed in the ensuing spring, for this we cannot recommend anything cheaper or more durable than the new zinc tally.

This is the principal month for budding roses. Always bud on the northeast side of the stock, that the powerful rays of the sun may not scorch the bud before it has taken root; a preferable bandage to bass is narrow tape dipped in a melted mixture of pitch and beeswax, this will stick without tying and protect the place from wet.

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## MASSACHUSETTS HORTICULTURAL SOCIETY.

An adjourned meeting of the Society was held at their hall on Saturday, 25th inst. The President, Hon. E. Vose in the chair. The report of the Committee appointed to consider the subject of the approaching anniversary was read and accepted.

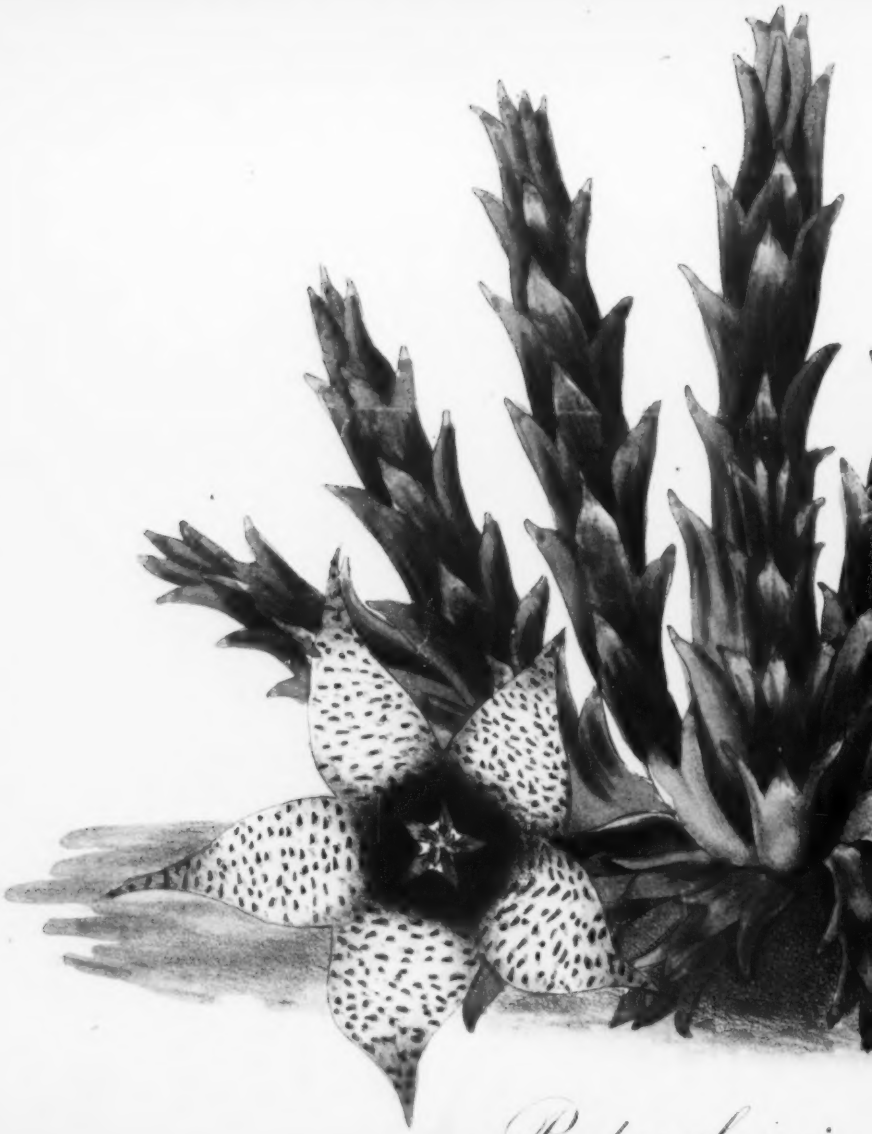
In pursuance with the report, a committee of three were chosen to invite some gentleman of science to deliver an address on the occasion of the anniversary.

On motion of Mr French, a general committee of arrangements was chosen; which committee consists of the following gentlemen: Messrs. G. W. Pratt, Cheever Newhall, B. V. French, Joseph P. Bradlee, M. P. Wilder, J. E. Teschemacher, Samuel Walker, C. M. Hovey, Geo. C. Barrett, E. Weston, Jr.

*Voted*, On motion of Mr French, that the committees on Fruits and Flowers superintend their respective departments under the direction of the general committee of arrangements.

The society then adjourned to meet this day two weeks at eleven o'clock, A. M.

*Saturday, July* 25.



*Podanthes irr*

Pendleton's Lithog.ª Boston.

*irrorata*.